

Claims

- Sub Q1*
1. Device for prevention against explosion of an electrical transformer (13) comprising an enclosure filled with combustible coolant, and a means for decompressing the enclosure of the transformer, characterized in that the decompression means comprises a rupture element (1) provided with a retention part (4) including first zones which have a reduced thickness in comparison with the rest of the retention part and are capable of tearing without fragmenting when the said element ruptures, and second zones which have reduced thickness in comparison with the rest of the retention part and are capable of folding without tearing when the said element ruptures, the said rupture element being capable of breaking when the pressure inside the enclosure (14) exceeds a predetermined ceiling.
2. Device according to Claim 1, characterized in that the rupture element (1) is provided with a sealing component which is arranged on the coolant side and is capable of closing off small-diameter holes (6) formed in the retention part.
3. Device according to Claim 2, characterized in that the sealing component is in the form of a lining (9) on the retention part, the said lining being preferably based on polytetrafluoroethylene.
4. Device according to any one of the preceding claims, characterized in that the retention part has a domed shape with convexity outwards, on the opposite side to the coolant.
5. Device according to any one of the preceding claims, characterized in that the retention part is metallic, made of stainless steel, aluminium or aluminium alloy.
6. Device according to any one of the preceding claims, characterized in that it comprises a rupture-detection means integrated with the rupture element.

7. Device according to Claim 6, characterized in that the rupture-detection element comprises an electrical wire (11) capable of breaking at the same time as the rupture element (1), the electrical wire being adhesively bonded on the rupture element.

8. Device according to Claim 7, characterized in that the electrical wire is arranged on the opposite side of the retention part to the coolant, the electrical wire being covered with a protective film (12).

9. System for prevention against explosion of an electrical transformer (13) comprising an enclosure (14) filled with combustible coolant, and a means for decompressing the enclosure of the transformer, characterized in that it comprises a plurality of devices according to any one of the preceding claims, including one on a main enclosure (14) containing the windings and one on each on-load tap changer (32).

10. System according to Claim 9, characterized in that it comprises at least one device according to any one of the preceding claims, on at least one electrical feed-through (36).

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